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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 10/688,124  | 10/17/2003  | Jonathan N. Howarth  | SU-7190-A                | 2013             |
| 7982 7590 01/26/2007<br>EDGAR SPIELMAN<br>ALBEMARLE CORPORATION<br>451 FLORIDA BLVD.<br>BATON ROUGE, LA 70801 |             |                      | EXAMINER<br>LEVY, NEIL S |                  |
|   |             |                      | ART UNIT<br>1615         | PAPER NUMBER     |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 01/26/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

7/17

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/688,124             | HOWARTH ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | NEIL LEVY              | 1615                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 36-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/04;1/05;5/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group II in the reply filed on 10/27/06 is acknowledged. The traversal is on the ground(s) that Searching all claims would not be an undue burden.

This is not found persuasive because At present, such extended search would in fact pose an undue burden, as indicated prior office action

The requirement is still deemed proper and is therefore made FINAL.

The election requirement is withdrawn in view of attorney's arguments of 10/26/06 interview.

Claims 1-17,36-45 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/27/06.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18-35 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The claims are to a contaminated water and chlorine composition.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 18-35 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compositions of water, hydantoin and free chlorine, does not reasonably provide enablement for water with microbiocidally effective quantities of hydantoin/chlorine required to effect microbiocidal activity in that water.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. In essence, the claim requires contaminated water, decontaminated to some degree by addition of hydantoin. It is not at all clear what purpose is achieved by having a composition of contaminated water treated with a chlorine releasing agent and containing free chlorine, and how one is to use this free Cl containing composition of water.

***.Claim Rejections - 35 USC § 103***

Claims 18-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over SMITH

4925866 in view of WHITE et al 411953 and HOWARTH & NALEPA-2001.

The instant DBDMH, preferred by SMITH (column 6, line 29) is added to water that contacts biofilm (column 7, lines 35-61) as indicated by growth of unwanted organisms now removed more effectively than by bleach (column 8, lines 13-22). The amount of DBDMH is maintained between 1-1500 ppm (column 7, top) thus permitting the instant range of free Cl effective to treat and maintain surfaces clog-free; free of biofilm (column 8, top). At example 1, 1ppm of BCDMH provided 0.6 ppm free Cl; thus at a rate of 1500 ppm, free Cl would be about 900 ppm. Claim 9 is to DBDMH; claim 4 is 1-1500 ppm.

Example 1 shows how to determine the amount needed to treat. Although no comparison between DBDMH and BCDMH is shown, it is evident that the artisan could choose the most economical product to use.

WHITE shows the instant dibromo 5,5 dialkyl hydantoins (column 7, bottom) as superior microbiocides, particularly DBDMH (column 4, bottom) but with alternative hydantoins also useful, thus, substitutable for DBDMH,

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while HOWARTH & NALEPA provide comparison of DBDMH and BCDMH & showed superior results and less consumption required of the DBDMH (page 5, 6). DBDMH granules were of the instant form (page 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made desiring to utilize disinfection & biofilm control means, to use any of art recognized means, as of the Smith granules chosen as desired to increase stability, dispersibility, compatability of ingredients, increased efficacy & reduced cost, while White, & Howarth & Nalepa show motivation to utilize DBDMH- its more effective than BCDMH.

The amounts and proportions of each ingredient are result effective parameters chosen to obtain the desired effects. It would be obvious to vary the form of each ingredient to optimize the effect desired, depending upon the particular water treatment and application method of interest, reduction of toxicity, cost minimization, enhanced, and prolonged effects.

Applicant has not provided any objective evidence of criticality, nonobvious or unexpected results that the administration of the particular ingredients' or concentrations provides any greater or different level of prior art expectation as claimed, and the use of ingredient for the functionality for which they are known to be used is not basis for patentability.

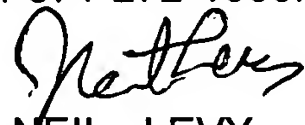
Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL LEVY whose telephone number is 571-272-0619.

The examiner can normally be reached on Tuesday-Friday, 7 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL WOODWARD can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
NEIL LEVY  
Primary Examiner  
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